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HOMEMAKERS' CHAT

TUESDAY, JANUARY 14, 1941.

SUBJECT: "QUESTIONS AND ANSWERS." Information from the Bureau of Agricultural Chemistry and Engineering, U. S. D. A.

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The mailbag this week contains quite a variety of questions. One letter asks for directions for waterproofing a tent. Another letter reports an aluminum kettle ruined by a solution of metallic salts. One letter from the wife of a man who works at welding wants to know how to fireproof his work suit so flying sparks won't cause burns. Another housewife asks how to fireproof kitchen window curtains.

That's the batch of questions up for today. The answers to these questions come from chemists of the U. S. Department of Agriculture.

Let's answer first the man who wants to waterproof his canvas tent.

The chemists have worked out a number of waterproofing mixtures for canvas which you can make up and apply at home at fairly low cost. One satisfactory mixture for a tent includes beeswax, crude vaseline, coloring matter, and painters' naphtha, or kerosene and gasoline. You can paint this mixture on the tent with a brush, or you can spray it on. But to do a good job you need to know the exact ingredients and proportions in the mixture, and all the details of making up and applying. So the best answer to this letter is a bulletin. Farmers' Bulletin No. 1157 goes free to the man who wants to waterproof his tent. And anyone else interested in waterproofing a tent, an awning, a wagon cover, or any other article made of canvas is welcome to a copy of this bulletin. Once again.....the bulletin on waterproofing canvas is No. 1157. Its full title is: "Waterproofing and Mildewproofing of Cotton Duck." And you can send a postcard to the U. S. Department of Agriculture for your copy.

Now let's go on to the next letter. That letter has a sad story to report. It says: "The other day I tried soaking pine cones in a solution of copper chloride so they would burn with a greenish blue color in the fireplace. I put water and crystals of copper chloride in my aluminum kettle, and was just about to drop in the pine cones when-- puff, my keetle began to disappear. The copper chloride seemed to be eating the aluminum. When it finished eating, the kettle had no bottom at all."

Dr. Martin Leatherman of the Bureau of Agricultural Chemistry and Engineering says: Never use metallic salts in any metal container. Some metallic salts react more slowly than copper chloride with metal. But many of them can damage aluminum, tin, steel or galvanized iron. You can feel safe about mixing these chemicals in earthenware crocks, glass jars, or enamelware which has no chips or cracks. Chipped enamelware won't do because the solution gets at the iron underneath.

One other point about using metallic salts is that many of them are poisonous. So be careful to clean your containers after they have had the salt solution in them. And don't let the baby nibble on the pine cones after you have treated them.

You can prepare pine cones to give off many different colors as they burn in an open fire. Cones that have soaked in a solution of strontium or lithium chloride will give off a red color. Those prepared with copper chloride or copper sulphate will give off a greenish blue. Barium chloride gives green. (If you can't get the chloride, buy barium carbonate (rat poison) and dissolve it in a little hydrochloric acid. This will give you barium chloride). And calcium chloride gives an orange color.

Dissolve about a pound of each chemical separately in a small amount of water. The more salt the cone absorbs, the brighter the color when it burns. Tie the cones in a cheesecloth bag. Soak them in the solution a few hours. Then spread them out to dry overnight.

Now let's turn to the third letter. This comes from the wife of a welder. She wants to fireproof her husband's cotton work-suits to prevent him and the suits from getting burned.

Dr. Leatherman suggests dipping the cotton suit in a solution of powdered borax, boric acid and hot water. This is a simple and inexpensive solution for fireproofing any cotton fabric. The exact proportions to use are: 7 ounces of borax.....3 ounces of boric acid.... and 2 quarts of hot water. Stir the borax and boric acid into the hot water until the water looks clear. Then dip the suit into the solution just as if you were rinsing it in water. Wring out the suit. Hang it up to dry. Press it with a warm iron.

Of course, you have to dip the suit in this solution each time it is washed, for water dissolves the borax and boric acid. The same is true if the suit gets left out in the rain.

The last question comes from the housewife who wants to fireproof her kitchen window curtains. This is a very wise precaution to take, especially if the curtains are near the stove and likely to blow with the breeze.

The same directions just given for fireproofing the cotton suit are the answer to this question about fireproofing curtains. You'll be glad to know that the fireproofing treatment helps save the fabric in your curtains. It protects against the rotting often caused by coal gas or illuminating gas in the air.

That concludes the questions for today. On Thursday more questions will come out of the mailbag for answers from the scientists.

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